

REMARKS

Claims 5-8 are pending in the application.

Personal Interview

A personal interview was conducted with Examiner Tu M. Nguyen on December 17, 2002.

The careful attention the Examiner has paid to the instant application during the personal interview is noted with appreciation.

Per reliance upon the Examiner's statement that "if claim 5 operates both when the vehicle is moving and not moving, then the amended claim 5 contains allowable subject matter pending further search and consideration", the Applicant has further amended claim 5 to include that feature that regarding asserting control over the vehicle both when the vehicle is moving and when the vehicle is standing still. By so amending, it is believed that claim 5 is placed in condition for allowance. Accordingly, allowance of the claimed invention is respectfully requested.

Claim Objections

The Examiner has objected to claims 5-7 in view of minor informalities.

Claims 5-7 have been amended, as needed, to overcome this objection. Reconsideration and withdrawal of this objection are respectfully requested.

Claim Rejections under 35 USC 102

Claims 5-8 have been rejected under 35 USC §102(e) as being anticipated by Tsuzuki et al. (U.S. Patent No. 5,801,499).

Tsuzuki does not disclose all the features of the present invention. The object of the invention of Tsuzuki is to provide a control system for a vehicular drive unit, which can drive the accessories while reducing the discharge of exhaust gases and which prevents the delay in starting movement by interrupting the feed of fuel to the engine, by driving the engine using the motor-generator to thereby maintain the engine in the idling state (column 1, lines 36-42).

In the invention of Tsuzuki, the vehicle is usually equipped, in its exhaust system, with a catalyst for purifying the exhaust gases. The catalyst is functionally degraded when the temperature is low. Thus, the control, as described above with respect to the above object, is not desirable when the catalyst temperature is low. The control is released in accordance with the catalyst temperature (column 2, lines 2-10).

In Tsuzuki, when the temperature of the catalyst is above a predetermined value, the control for stopping the supply of the fuel to the engine and for driving the engine by the motor generator to maintain the engine in the idling state is performed. When the temperature of the catalyst is below the predetermined value, the specific control is not performed, that is, the engine is in the normal idling state.

Tsuzuki is different from the present invention in that:

1) Tsuzuki does not have control for increasing the temperature of the catalyst positively (Tsuzuki does not perform any specific control when the temperature of the catalyst is low, and simply maintains the engine in the normal idling state),

2) Tsuzuki does not have control for positively giving a load to the engine when the temperature of the catalyst is low, and

3) Tsuzuki is intended to maintain the engine in the idling state, and does not have any control for increasing the temperature when the vehicle is running.

Even though the claimed invention is not disclosed or suggested in the asserted prior art reference, in the interest of advancing the prosecution of this application and upon reliance of the Examiner's indicated allowable subject matter in the personal interview Summery Record, claim 5 has been amended to include further features of asserting control over the vehicle both when the vehicle is moving and when the vehicle is standing still.

Reconsideration and withdrawal of this rejection are respectfully requested.

New Claim

New claim 8 is added herein by amendment. As claim 5 is amended to conform with the Examiner's indicated allowable form, all claims dependent thereon, including the newly added claim 8, should also be allowed.

Allowance of claim 8 is thus respectfully requested.

U.S. Patent Application Serial No. 09/643,912
Atty. Docket No. 001062

Conclusion

It is believed that this Amendment is fully responsive to the Office Action dated **August 12, 2002.**

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

Attached hereto is a marked-up version of the changes made to claims 5-7 by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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PATENT TRADEMARK OFFICE

Enclosures: Version with markings to show changes made

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IN THE CLAIMS:

Please amend claims 5-7 as indicated below:

5. (Amended) A catalyst warming control apparatus for a hybrid vehicle asserting control over the vehicle both when the vehicle is moving and when the vehicle is standing still, having an internal combustion engine, a generator for generating electric power from [the] an output [from] of the internal combustion engine, a power storage unit for storing electric power generated by the generator, and [anelectric] an electric motor driven by the electric power stored in the power storage unit, the hybrid vehicle being driven by at least one of the [outputs from the] internal combustion engine and the motor, the catalyst warming control apparatus comprising:

 a clutch for performing the connection or disconnection of the transmission of the [the] power between the generator connected to the engine, and the motor;

 a coolant temperature detector for detecting [the] an engine temperature of [a catalyst of a value relating to the same, wherein the value relating the same includes the temperature of vehicle cooling water] of the internal combustion engine;

 a first comparison circuit for comparing the detected [result from the temperature detector] engine temperature with a preset first reference value; and

 a control circuit for allowing the generator to generate electric power and to store the power in the power storage unit when the internal combustion engine is driven, and when the detected [result by the] engine temperature [detector] is equal to or below the first reference value [according to the output from the comparison circuit].

6. (Amended) A catalyst control apparatus according to claim [1] 5, further comprising:
a remaining charge detector for detecting a remaining charge of the power storage unit or
a value relating to the same; and
a second comparison circuit for comparing the detected result from the remaining charge
detector with a present second reference value relating to the remaining charge, wherein
the control circuit drives the vehicle by the output from the internal combustion engine,
engages the clutch, and allows the generator to generate electric power and to store the power in
the power storage unit, when the detected result from the temperature detector is equal to or
below the reference value according to the output from the first comparison circuit, and when the
detected result from the remaining charge detector is equal to or below the second reference
value relating to the remaining charge according to the output from the second comparison
circuit.

7. (Amended) A catalyst warming control apparatus according to claim [1] 5, further
comprising:

a remaining charge detector for detecting a remaining charge of the power storage unit or
a value relating to the same; and
a second comparison circuit for comparing the detected result from the remaining charge
detector with a preset second reference value relating to the remaining charge, wherein
the control circuit allows the generator to generate electric power, disengages the clutch,
and drives the vehicle by the generated electric power and stores the electric power, when the

detected result from the temperature detector is equal to or below the first reference value according to the output from the first comparison circuit, and when the detected result from the remaining charge detector is above the second reference value relating to the remaining charge according to the output from the second comparison circuit.